

HEALTH EFFECTS DIVISION  
SCIENTIFIC DATA REVIEWS  
EPA SERIES 361

"INERT INGREDIENTS OF PESTICIDE FORMULATIONS"  
(FORMAT FOR IDENTIFICATION AND TOXICOLOGICAL APPRAISAL)

8/20/19  
(58)  
Format  
IIIA. EPA Accession Number and Name:

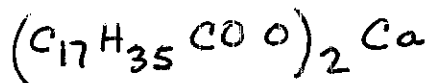
000263 Stearic acid, calcium salt of

B. American Chemical Society Chemical Abstracts Service (CAS) Name and Registry NumberOctadecanoic acid, calcium salt  
1592-23-0C. Other Names

(EPA S): Calcium stearate  
(S): Calcium distearate  
(T): Aquacal; Calstar; Flexichem CS; Synpro stearate

D. Chemical Composition

Ca(C18-H35-O2)2  
(MW) 607.00

E. EPA Chemical CodeF. Molecular StructureG. Chemical and Physical Properties (1)

1. solubility - practically insoluble in water, ether, chloroform, acetone, cold alcohol; slightly soluble in hot alcohol, hot vegetable and mineral oils
2. specific gravity (or density) - bulk density = 20 lb/ft<sup>3</sup> (approx.)
3. state, color, odor, etc. - granular, fatty powder
4. MP, BP, VP - (MP) 147°-149°
5. corrosiveness
6. technical products & impurities - Calcium stearate is the calcium salt of a mixture of fatty acids in which stearic acid predominates.
7. stability

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- H. Use as an Inert - solid diluent; carrier (3)
- I. Other Uses      Active?    Yes ( )    No (X)  
for waterproofing fabrics, cement, stucco; explosives; stabilizer in PVC  
resins; as a lubricant; pencils and wax crayons (1)  
(Pharmaceutical) lubricant
- J. Government Regulations - May be safely used in foods as a defoaming agent  
subject to FDA 21 CFR 121.1099. (4) May be safely used in foods subject  
to FDA 21 CFR 121.1071. (5)  
EPA 40 CFR 180.1001 - Exempt from the requirement of a tolerance when used  
in accordance with good agricultural practice as an inert ingredient in  
pesticide formulations applied to growing crops or raw agricultural products  
after harvest. (3)
- K. Manufacturer(s) - Conray Products; Ferro Corp.; C.P. Hall; Mallinokrodt;  
and several other manufacturers and suppliers (6)
- L. Environment
- M. Toxicology - "...stearic acid and its salts are normal products of the metabo-  
lism of fats and their metabolic fate is well established. Provided the con-  
tribution of the cation does not add excessively to the normal body load, there  
is no need to consider the use of these substances in any different light to  
that of dietary fatty acids." (7)
- N. Recommendation: Class 4  
Excessive feeding levels of stearates have resulted in fatty deposits in  
the liver without histopathological evidence of damage. Such deposits dis-  
appear upon reduction of the feeding level. Other than problems associated  
with the ingestion of high levels of saturated fats, no adverse biological  
activity is expected.
- O. Sources Used In Search:
- |                          |  |
|--------------------------|--|
| 1.    On Line Data Bases | 2.    Major References                   |
| a.    Toxline            | a.    The Merck Index                    |
| b.    Medline            | b.    NIOSH Registry of Toxic Substances |
| c.    Chemline           | c.    Chemical Abstracts                 |
|                          | d.    Biological Abstracts               |

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P. References & Review Articles

- (1) Merck and Co., The Merck Index, Rahway, N.J.: 1976.
- (2) National Institute for Occupational Safety and Health, Registry of Toxic Effects of Chemical Substances, Washington, D.C.: 1976.
- (3) U.S. E.P.A., Code of Federal Regulations; 40, part 180.1001, Washington, D.C.: 1976.
- (4) U.S. F.D.A., Code of Federal Regulations; 21, part 121.1099, Washington, D.C.: 1976.
- (5) Ibid, part 121.1071.
- (6) Oil, Paint and Drug Reporter, OPD Chemical Buyers Directory, Schnell Publishing Co., New York: 1974.
- (7) World Health Organization, Toxicological evaluation of some food additives including anticaking agents, antimicrobials, autioxidants emulsifiers and thickening agents, WHO Food Additives Series; 5, pp 20, Geneva: 1974.



13544

R100910

<b>Chemical:</b>	<b>Calcium stearate</b>
<b>PC Code:</b>	<b>800119</b>
<b>HED File Code</b>	<b>13100 Other Tox Documents</b>
<b>Memo Date:</b>	<b>01/01/87</b>
<b>File ID:</b>	<b>00000000</b>
<b>Accession Number:</b>	<b>412-05-0037</b>

**HED Records Reference Center**  
**10/15/2004**

